

Building Energy & Environmental Services



# **Guaranteed Solutions:**

#### **Process Cooling**

- Mixer & Sponge Systems
- Chilled Ingredient Water
- **Finished Product Cooling**
- Blast Freezing
- Refrigeration

#### **Process Heating**

- Water Heating
- Steam & Hot Water Systems

#### **Environment Conditioning**

- Proofing/Retarding
- Spiral (Finished) Products
- **Oven Steam**
- Mold & Particulate Control

### Industrial HVAC

- Makeup Air Systems
- Spot Cooling
- Space Pressurization
- Filtration
- Mechanical Cooling
- Ventilation

#### Waste Heat Recovery

- Ovens & Oxidizers
- Solar/Fuel Cells
- Compressed Air ٠
- Industrial Fryers

#### **Specialized Technologies**

- Absorption Refrigeration
- Cascade Refrigeration
- Industrial Heat Pumps
- Solar/Fuel Cells
- Organic Rankine Cycle
- Grey Water Recycling

# **Chilled Ingredient Water System**

Food Processors rely on chilled ingredient "ice" water for process - typically the colder the better. Existing technologies for chilling ingredient water are numerous, each with their own unique benefits and disadvantages. Air Management Technologies' "Balanced Heat Exchange (BHX) Technology©" solves all the performance, energy, sanitation, equipment footprint, environmental, and food safety challenges related to existing ice water chiller technologies in a modular package at existing or reduced capital investment levels. Part of our integrated suite of Closed-Loop applications, this system can actually "pay" for itself with no compromises on performance.

System utilizes dual double-wall heat exchangers located on entering and leaving side of baffled storage tank to assure maximum refrigeration is applied during both batching and recharge periods.



#### **Better Food Safety:**

Our new Chilled Process Water with BHX Technology is a patent pending closed-system which decreases the risk of exposure to bacteria, molds, and other contaminants when compared to open systems. Water is never exposed to an atmospheric sump where it may come in contact with unwanted contaminants. Additionally sanitation measures on open systems may pose additional risk with human interface, foreign objects, and chemical compounds. Our heat exchangers are double wall mitigating risk of a glycol breach unlike open systems and the vast majority of closed systems in use.

#### **Lower Operation Cost:**

Our BHX Technology system provides a lower operational cost for reasons which include energy savings from reduced pump horsepower, as well as avoided labor cost by eliminating the need for Sanitation requirements. Realized operational savings may be in excess of \$10,000 per year.



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## Chilled Ingredient Water Systems with BHX Technology©

#### Lower Capital Cost:

Our exclusive BHX Technology allows a lower installed cost and with a compact footprint, may be located right at the point of use in most applications, saving additional capital infrastructure costs associated with electrical, utilities piping, and insulation/jacketing. Flexibility also eliminates the need for expensive mechanical room space and may be located outside or roof mounted in a fiberglass enclosure. System is available as a packaged solution which will allow for a simple installation via provided standard utility connection points.

#### **Source Refrigeration**

Our chilled water system can source cooling from new or existing glycol systems, chemical and natural refrigerants, operate as a "stand alone" solution. Note utilizing a secondary refrigerant decreases refrigerant inventories and associated environmental and regulatory impacts. Equipment sizing is reduced utilizing our BHX Technology to handle average loads and not peak loads through a storage and proprietary control logic.

#### **S**ustainability

BHX Technology system reduces energy usage by design which equates into Greenhouse Gas reductions and Environmental Stewardship. Additional Closed-Loop energy technologies exist to increase sustainability through options for an industrial heat pump to provide hot thermal solutions (proofers heating, hot water, steam pre-heat) and water-side economizers for "free" pre-cooling of incoming water as conditions permit.

#### **Closed-Loop Energy System**

Our Chilled Water System with BHX Technology© is part of Air Management Technology's Closed-Loop Waste Energy Systems. These systems harnesses the synergies inherit in Food Processing Facilities where both hot and cold thermal utilities are often used simultaneously. Recycling the waste stream from one process into the energy stream for a different utility creates efficiencies benefiting Food Safety, Environmental, and Energy related systems. Closed-Loop Energy Systems include Chilled Water, Glycol Refrigeration, Water Heating, Proofers, Basket Washing, and Heat Recovery.



# **About Us**

Air Management Technologies has delivered energy, thermal process conditioning, and environmental solutions for over twenty five years. Our written performance guarantee places the responsibility in our hands and the life cycle benefits in yours. Cost conscious decisions are made with the customer in mind and every project is guaranteed to operate as speci-







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